OPERATING AND INSTALLATION INSTRUCTIONS

FOR YOUR NEW

TRIPPLITE POWERVERTER

IMPORTANT

READ BEFORE USING

designed and manufactured by

TRIPP LITE DIVISION OF TRIPPE MANUFACTURING CO.

133 N. JEFFERSON • CHICAGO, ILLINOIS 60606

GENERAL

Congratulations! Your wise purchase of a TRIPPLITE transistorized POWERVERTER gives you a quiet, compact, handy source of 117 volt AC current in your car, boat, trailer, – anywhere you have a 12 volt DC power supply. Read these instructions carefully and you will receive maximum use and life from your POWERVERTER.

Your POWERVERTER has an indefinite life when used within its ratings (see "SPECIFICATIONS"). Solid state design eliminates the noise and replacement problems of a vibrator, but requires care in using the POWERVERTER. Asking the POWERVERTER to supply more than its rated watts of output (overloading) can quickly burn out the transistors.

Each TRIPPLITE POWERVERTER is **individually** checked and certified to meet or exceed all specifications at the time it is packed. TRIPPLITE guarantees the POWERVERTER against defects in materials and/or workmanship and will repair or replace such defects at no charge. Since only overload or overvoltage misuse can burn out transistors, a charge will be made for POWERVERTERS returned with burned out transistors. Installation or use other than as indicated in these instructions voids the guarantee.

INSTALLATION

Model PV-100 – Plug the cigar lighter plug into your lighter receptacle (12 volt DC negative ground **only** – for positive ground, reverse the wires on the cigar lighter plug.) Use ordinary extension cord between your POWERVERTER and your appliance – do NOT lengthen the cord between your POWERVERTER and the cigar plug. Limiting factor on the output of your PV-100 is the cigar lighter plug. For more output see models that attach directly to battery.

Models PV150, PV200, and PV400 – Set the "ON/OFF" switch to "OFF". USE THE HEAVIEST WIRE AVAILABLE. The TRIPPLITE accessory wiring kit offers an effective, made-to-fit answer (see "ACCESSORIES"). Or you may use standard battery "jumper" cables, available at any automotive accessory store.

wire gauge	max. watts out	wire gauge	max. watts out
18	100	12	200
16	125	10	300
14	150	8	400

Connect the "POS" terminal on your POWERVERTER to the POSITIVE post on your battery. Connect the "NEG" terminal to the NEGATIVE. KEEP THE WIRES AS SHORT AS POSSIBLE, to minimize current loss in the wires. Connect DIRECT to your battery only – connecting anywhere else may damage your wiring.

All models – Locate your POWERVERTER as far away as possible from heat sources, such as a car heater, trailer stove, etc. Do not block air flow or overheating may result. The TRIPPLITE accessory mounting adapter kit provides an easy, made-to-fit mount for permanent installation (see "ACCESSORIES").

USING YOUR POWERVERTER

CHECK YOUR APPLIANCE – wattage requirements appear on your appliance, usually on the nameplate. This wattage figure must be the **same** as or **smaller** than the "Output watts – Continuous" rating for your model POWERVERTER (see "SPECIFICATIONS"). The following table gives approximate wattage requirements for common appliances, **but be sure to check YOUR specific appliance:**

Lamp bulbs – watts on bulb
Vacuum cleaners – 200 to 500 watts
Radios (small) – 35 to 200 watts
Television sets – 150 to 300 watts
Drills:
1/4"-175 to 350 watts)
3/8"-250 to 450 watts)
1/2"-350 to 500 watts)
more starting or under heavy load
Motors – Capacitor & Repulsion Induction types (for Split Phase use next higher horsepower figures), watts required:

HP	Start-Loaded	Start-Unloaded	Running	Commonly used appliance motors:
1/6	1530	380	260	Refrigerators – 1/6 to 1/4 HP
1/4	1770	445	350	Washing Machine – 1/4, 1/3 HP Furnace blower or stoker-1/4 HP Compressor motors (Refrigerators Air Conditioners, etc.) ALWAYS start "Loaded".

PLUG YOUR APPLIANCE into the POWERVERTER receptacle. Connect or switch "ON" your POWERVERTER, then turn on your appliance. If your appliance fails to operate in a few seconds, IMMEDIATELY disconnect or switch "OFF" your

POWERVERTER and disconnect your appliance. Recheck your installation and the size of your load.

SPECIAL APPLIANCES – Some appliances (electric clocks, some tape recorders, etc.) require exactly 60 cycle AC to operate properly. Your POWERVERTER produces 60 cycle power at 12.6 volts input; as the input voltage varies from 12.6, the cycles will also vary. This can produce a speed change (clocks and some tape recorders will run fast or slow) or can slightly distort the sound quality of very high fidelity sound equipment, but is normal operation off a standard inverter.

High wattage appliances that generate heat (toasters, coffee pots, fry pans, air conditioners, rotissaries, etc.) draw far too much current for an inverter – do not attempt to use them, since they immediately burn out your POWERVERTER.

USING MORE THAN ONE APPLIANCE is permissible, providing the sum total of the wattage for each appliance is the **same** or **lower** than your POWERVERTER's "Output watts – "Continuous" rating. Fluorescent lights give the most light for current used, giving you the most light for your POWERVERTER's capacity, for example.

SPECIFICATIONS:

Read carefully – this section describes the limits of what your POWERVERTER can do. Operation of your POWERVERTER beyond its specifications will damage the unit and void the guarantee.

POWERVERTER SPECIFICATIONS

Standard Input Voltage 12.6 D.C.
Standard Output 117 V., 60 C., A.C. Standard Conditions: 70° F.

	Model PV-100	Model PV-150	Model PV-200	Model PV-400
Output Watts @ Input Amps				
Continuous	100W @ 10A	150W @ 14A	200W @ 18A	400W @ 38A
Intermittent (5 Minutes)	115W @ 11A	175W @ 16A	250W @ 22A	450W @ 42A
Instantaneous (5 Seconds)	130W @ 12A	200W @ 18A	300W @ 25A	500W @ 44A
Input Amps No Load	2½	3	3½	5
Size (WxDxH)	4¾x4¾x3	5x5x3½	5x5x3½	7x6x4
Weight				
Net	4¼	4¾	4¾	12
Shipping	5	5½	5½	13

*Also available! Other input and output voltages, frequencies and power ratings on special order.

INPUT VOLTAGE – the voltage supplied by your battery. Your battery voltage will vary slightly depending on how fully charged the battery is, whether the motor is running, and how properly your voltage regulator is working. Derate your "OUTPUT WATTS" specification by 10% for each volt less than 12.6 volts that your battery can supply.

Input over 15 volts (normally happens with engine running fast and a faulty voltage regulator) may burn out your POWERVERTER transistors.

INPUT AMPS – the amount of current your POWERVERTER and your appliance drains from your battery. The more watts your appliance uses, the more it will drain your battery. A normal car battery has 80 ampere-hours of capacity (80 amps for 1 hour, 40 for 2, etc.) The engine (if running) will add 35 amps if no other car lights, etc. are on.

STANDARD TEMPERATURE – 70° Fahrenheit. The power capacity of any inverter drops as the air temperature goes up. Derate your POWERVERTER rating 10% for each 15°s above 70°F of the surrounding air. 70° = 100% 85° = 90% 100° = 80% etc.

OUTPUT VOLTAGE & FREQUENCY – 117 volts, 60 cycle AC (at 12.6 volts input and about 3/4 rated load) will vary directly with **INPUT** voltage and inversely with load.

OUTPUT WATTS – The size of the load your POWERVERTER can successfully operate.

CONTINUOUS – the power available from your POWERVERTER continuously for an indefinite time (without damage to the POWERVERTER).

INTERMITTENT – the power available for no more than five minutes (more than five minutes may damage your POWERVERTER) with five minutes "OFF" for cooling. If your POWERVERTER is already operating at its "CONTINUOUS" rating, use the INTERMITTENT" rating no more than one minute, with at least five minutes of "CONTINUOUS" use between each "INTERMITTENT" use.

INSTANTANEOUS – the power available for no more than five seconds, to start your appliance or provide a momentary burst of power while running.

SERVICE FOR YOUR POWERVERTER:

Properly installed and used, your POWERVERTER will last indefinitely, with no maintenance at all. However, should you need

service, you may repair locally or send back to the factory:

Factory service – Write TRIPPLITE, giving our model number, the number on the transistors, date purchased, and a full description of the difficulty (do NOT return the POWERVERTER until advised). TRIPPLITE will send you replacement parts or authorize you to return your POWERVERTER to the factory. Contact TRIPPLITE for ALL repairs under warranty.

Local Service – Your local electrician can repair, using the information in this instruction sheet and the schematic diagram.

The only part likely to need repair (due to overloading the POWERVERTER) is the transistor. The schematic and parts list give equivalent transistors your serviceman may use for the repair.

ACCESSORIES

The following accessories allow you to permanently mount and/or wire your POWERVERTER easily and neatly. The kits contain all hardware needed to install, and present the best possible appearance and installation available for use with your TRIPPLITE POWERVERTER.

Mounting bracket – Securely attaches your POWERVERTER under your dash board, on the dashboard – or on any flat surface. Includes all hardware and complete, easy to follow instructions. Be sure you order the mounting bracket for your model POWERVERTER:

Model #	Mounting bracket #	Recommended Resale Price
PV100, PV150 and PV200	KIT #PV-MK-1	$3.75
PV400	KIT #PV-MK-2	$5.00

Wire kit – Includes two 16 feet lengths of proper gauge wire and terminals to use in wiring your POWERVERTER:

Model #	Wire Kit #	Recommended Resale Price
PV150 and PV200	KIT #PV-WK-1 12 gauge wire	$3.00
PV400	KIT #PV-WK-2 8 gauge wire	$7.50

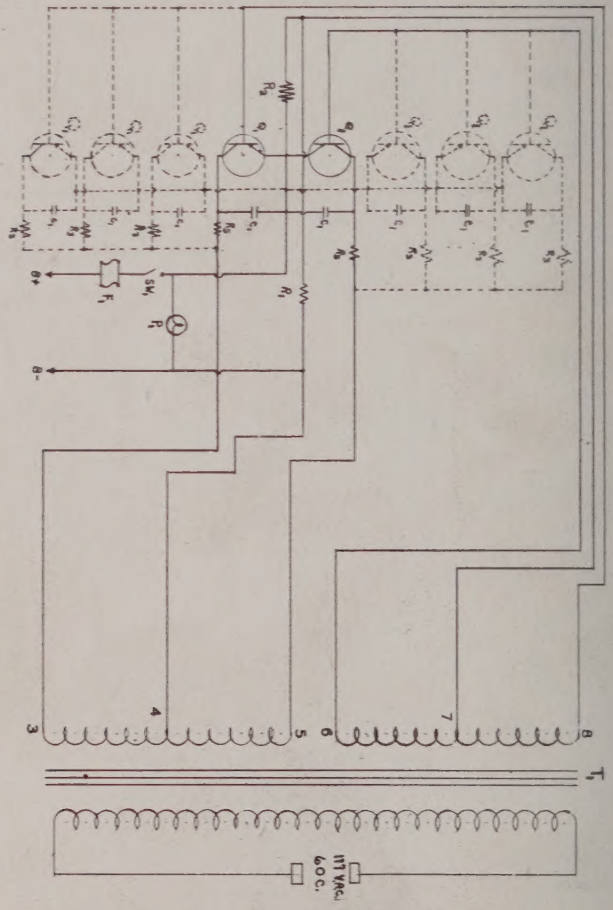
MINIMUM INVOICE $5.00

REPLACEMENT PARTS

	PV-100	PV-150	PV-200	PV-400
Q1 transistors	2 REQ'D	2 REQ'D	4 REQ'D	8 REQ'D
Trippe #				
*T03 type	69-100	69-102	69-101	69-101
**T036 type	I-1105	ES-1314	ES-1314	ES-1314
Equivalent #				
T03 type	2N1554	2N1558	2N1558	2N1558
T036 type	2N442	2N278	2N278	2N278
R1	500 ohm, 5w	500 ohm, 5w	500 ohm, 5w	500 ohm, 5w
R2	10 ohm, 25w	9 ohm, 25w	7½ ohm, 25w	5 ohm 50w
R3	N/A	N/A	.27 ohm, 5w (4 req'd)	.27 ohm, 5w (8 req'd)
C1	20 mfd, 25v (2 req'd)	20 mfd, 25v (2 req'd)	20 mfd, 25v (4 req'd)	20 mfd, 25v (8 req'd)
F1	N/A	3AG 15 amp (1 req'd)	3AG 20 amp (1 req'd)	3AG 20 amp (2 req'd)
SW1	N/A	SPST	SPST	DPST
P1	N/A	N/A	N/A	#53 12 volt
T1	62-101	62-100	62-100	62-400

* "Diamond" shape
** "Doorknob" shape

SCHEMATIC DIAGRAM (all models)



Policy of the TRIPPE MFG. CO. is one of continuous improvement;
prices and specifications are subject to change without notice.